NOTE XXII.

ON A COLLECTION OF MAMMALS FROM BILLITON.

BY

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(Plate 7, figs. 11—14).

Up to this day I knew only a single Mammal, *Sciurus prevostii*, from Billiton, a small island, situated between Borneo and Banka. As the islands between Sumatra and Borneo bear a peculiar scientific interest with regard to the distribution of the animals and to the hypothesis concerning the relation in prehistorical times between these two large islands, I was in sanguine expectations in receiving a letter from Dr. A. Vorderman (Batavia), containing the kind information that he had made a journey to Billiton in June 1888 and now presented the then collected animals to our Museum. And how great was my astonishment in finding in that collection no less than 10 species of Mammals from Billiton. So that we know at present eleven well-defined species from that interesting point in the Malay Archipelago.

Two species, *Pteropus edulis* and *Sciurus prevostii*, in the collection are from Mendanao, a small island close to the west coast of Billiton.

The following 10 species are contained in Vorderman's collection from Billiton.

Tarsius spectrum Geoffroy.

An adult female and a young male (in spirits).

This Maki is known from Java, Savoe (between Sandelwood and Timor), Sumatra, Banka, Borneo, Celebes, the Saleyer- and the Philippine Islands.

Sciuropterus vordermanni, n. sp.

This flying squirrel belongs to the small sized forms like *sagitta*, *aurantiacus* [1]), *setosus* and *platyurus*; it differs in the color of upperparts from *sagitta* and *aurantiacus* as it is dark colored like *setosus* and *platyurus*, but is distinguished from the two latter ones by its partially distichous tail and from all the other small sized *Sciuropteri* by its different skull, especially by the peculiar shape of the tympanic bullae.

Description of the type-specimen, an adult male (in spirits):

Hairs of back black, each hair with a terminal chestnut band; sides of parachute bordered with pure white; under surface of body and of parachute pure white, cheeks and sides of neck with a brownish orange tinge. Hairs of tail of a fine chestnut, lighter towards the base of the tail. Generally the hairs are very soft and rather long.

The tail is partially distichous, namely only its underside is distichous. All the hairs of the tail from its root to its tip are exactly of the same length.

No cheekbristles, nor bristles at the base of ears. Whiskers black.

Dimensions in millimetres:

head and body	100
tail with tuft	110
hindfoot	21
ear	12.5 × 4

1) *Sciuropterus aurantiacus* is very rare in zoological collections. It has been described in 1843 by Wagner, Schreber's Säugethiere, Suppl. Bd. III, p. 225, after a specimen in the Würzburg Museum, with the habitat Banka. I refer to Wagner's exact description. In the Leyden Museum *Sc. aurantiacus* is represented by a stuffed specimen and a skeleton, both from Banka, and presented in 1862 to our Museum by Mr. v. d. Bossche.

skull	27
nasals	7
greatest breadth	17
palate	11.5
diastema	5.5
length of upper molar series	5.5

Very characteristic in the skull is the enormous development of the tympanic bullae (plate 7, fig. 14): they are much broader and flatter than in any other species, nay than in *Sc. pearsonii* (plate 7, fig. 4).

Incisors are lighter colored than in any other species of the group.

I connect with this species the name of Dr. Vorderman, in order to show him our gratitude.

Sciurus albiceps Desmarest.

Three adult specimens, dried skins. They belong to the true *albiceps*-type. In one of the specimens the tail presents some very curious peculiarities: it is much shorter than normally and bears rings. In general the tail with its tuft measures between 460 and 530 mm., but in the specimen in consideration the tail measures only about 400 mm.; the hairs are very long, about 47 mm., those of the tip of the tail about 90 mm.; tip and base of tail deep black, all the other hairs have small orange colored tips, so that the tail seems to be alternatively ringed with broad black and narrow orange colored bands.

This species has been collected in the following localities: Siam, Malacca, Sumatra, Borneo and Java. Dr. Anderson, who united *Sciurus rubriventer* with *Sciurus bicolor* and *albiceps*, stated (Yunnan Expedition, p. 220) that this species (*Sciurus bicolor*) also was distributed over *Celebes and the adjacent smaller islands!* That *Sc. bicolor*, *rubriventer* or *albiceps* live in those *smaller islands* is quite hypothetical and not based upon a single fact nor stated by observations made by travellers or hunters: *Sciurus rubriventer*

is one of the typical Celebes-species and is unknown from other localities.

Sciurus soricinus Waterhouse.

Two adult specimens, dried skins, and one adult female in spirits.

Known from Sumatra, Banka, Borneo and Java.

Sciurus notatus Boddaert.

One adult specimen, a dryed skin, belonging to the variety with red colored underside of body.

This species is a very common animal in Malacca, Java, Sumatra, Banka, Borneo, Celebes and the Saleyer Islands (cf. Notes from the Leyden Museum, 1883, p. 133, and Max Weber, Zoologische Ergebnisse, 1890, Mammalia, p. 117).

Tupaja javanica Horsfield.

One adult specimen, a dried skin.

This species has been collected in Java, Sumatra, Banka and Borneo (cf. Catalogue des Mammifères du Muséum d'Histoire naturelle des Pays-Bas, Tome XII, p. 116).

Rhinolophus trifoliatus Temminck.

One specimen, an adult male, in spirits.

This beautiful and very rare species has been observed in Borneo and Java.

Vesperugo vordermanni, n. sp.

One specimen, an adult female, in spirits.

Distinguished from all the other *Vesperugo*-species from the Malay-Archipelago by its *white* wing-membranes.

The ears, laid forwards, reach to the end of the nose; inner margin very convex in its lower half, then straight; tip rounded off; upper half of outer margin slightly convex, then emarginated, lower half slightly convex above, then

straight till close to the angle of the mouth, without forming a lobe. Inner margin of tragus concave, tip obtusely pointed and curved inwards, outer margin convex, at the base of the outer margin a distinct triangular lobe.

Wings from the base of the toes; tip of tail projecting; a distinct although small post-calcaneum lobe.

Wing-membranes along the side of the body hairy and colored like the back, for the rest naked; underside of interfemoral with fine hairs arising from transverse dotted lines like in *Vespertilio muricola* Hodgson.

All the hairs are of a dark brown color, lighter towards the tips. The naked wing-membranes are pure white, contrasting strongly with the dark colored body.

Inner upper incisor long, with a well-defined external cusp, outer incisor, well-developed, attains about the level of the external cusp of the inner incisor. Lower incisors trifid. Second upper premolar about two third of the height of the canine; first upper premolar very small, hardly visible without a lens, and placed inside the tooth-row, so that it is not visible from without; first lower premolar half the size of the canine, second lower premolar higher and in the same level with the most developed cusp of the first molar.

Measurements in millimetres:

head and body	50
tail	32
ear	13 × 8
tragus	5 × 2
forearm	33
thumb with claw	5
second finger, metacarpal	30
» » 1st phalanx	13
third finger, metacarpal	31.5
» » 1st phalanx	11.5
» » 2nd »	11
» » 3rd »	5
fourth finger, metacarpal	31.

fourth finger, 1st phalanx	10
» » 2nd »	8
fifth finger, metacarpal	29.5
» » 1st phalanx	7
» » 2nd »	5.5
tibia	13.5
calcaneum	14
foot with claws	7

Vespertilio muricola Hodgson.

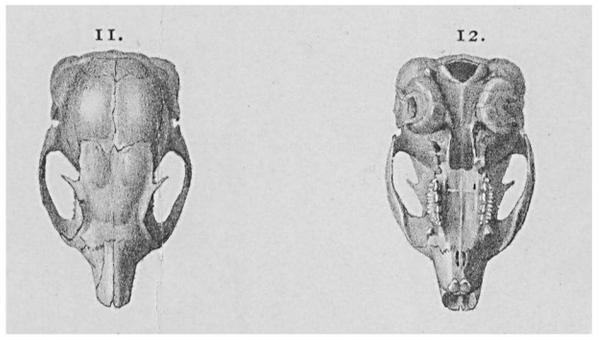
Two adult females in spirits.

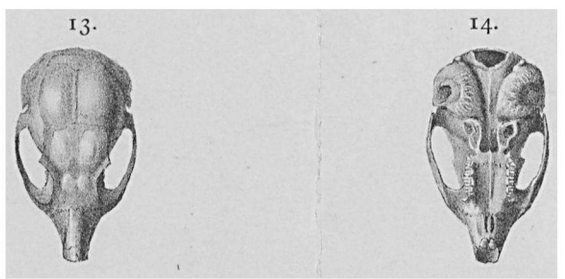
This species occupies a very large area of distribution, as it is to be found from Himalaya to the Malay Peninsula, and from Sumatra and Java eastward to Ternate, Celebes and Amboyna.

Emballonura semicaudata Peale.

Two adult specimens, male and female, in spirits.

This is the largest species of the genus. In Dobson's Catalogue the Polynesian subregion is given as its habitat, but in our Museum are specimens from Goram, collected by von Rosenberg in 1866, and also from Sumatra, Deli, presented to our Museum by Dr. B. Hagen in 1885, so that we state here that this species has a much larger geographical distribution (cf. Catalogue des Mammifères, 1888, Tome XII, p. 195, and Notes from the Leyden Museum, 1889, p. 30).





R. Raar ad nat. del. et lith.

P. W. M. Trap impr.

11, 12. Sciuropterus aurantiacus *Wagner*.
13, 14. Sciuropterus vordermanni *Jentink*.